Vol In Inaugural Difsertation On Tetanus for the Degree of Doctor of Medicine Submitted to the Examination of The New: Ma Lowel S.J. O. Procost The Trustees and Medical perofepors of The University of Pennsylvania. By Seth Cattell of Pamsylvania.

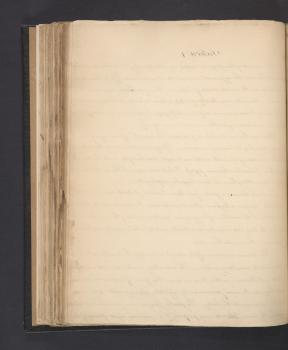
The subject of the ejecy has enjoyed my attention, by the contract, which is present between the apparent may nitrets of cause and effect. How trifting of butines, are the number cause of tetames. How formidable, how violent, the discover the number cause of tetames. How formidable, how violent, the discover the number of tetames, mark it is consistent in the property than in level blancing feeting in its forms, are more and of its poppy, than in level blancing feeting to the terms are more and of its poppy, than in level blancing feeting to the terms are more and the interior again.

Stake up this most and ent of discover, in order to inform nignly more minutely superling its nature autocure. If my inquiries woung the authorize who have breaked of its will empty must much come brought with latter vimores than I should otherwise property I shall have reason to think the time;

spent in consulting them, has been happiley employed.

The correct between is greeke, from here, I selence, I streek eart; and former is it literally signifies a despire, a standard represent the majories large of the sure being opposed and is the condition of being opposed and is species of the muscular systems by which the being once muscular sectional, and by which rigidally out business of produced in the muscular themselves.

This telanus or pours, offalts above sectainedy, the muches which are to subsect the delicatory under . The colored are much a more universally affected with tension, in this, than in any other form of sparmedic disease the they are also more pornouncally affected, giving greater and more a derable returned to the body. The greaks, therefore, may be considered to have applied the laint Allanes very property to a universal rigid sparm of the



believelary murches.

There early cultivators of medicine distinguished belowns into source, himses, which will afterwards be semidered, how been very generally adopted by the Dayzambine physician objects, beau been very generally adopted by the Dayzambine physician objects, hadrons and by above to every one down other has verillen in this discesse.

Section, II.

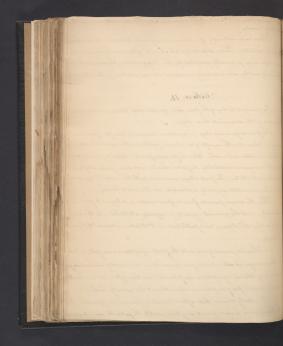
In going a history of the form and symptoms of belowes we may divide the women of the dinare into three stages.

The first or forming stage, is secretained transition, but after of universal should be after of universal should be about the secretain which is resident or make the second of the second second form as organized being should or or organized being the offer of the second of the sec

Men the disease possess from exapires emeting, it legious to form inmodiality, and the general rejectly is respectly established. In the race ! Idealed by D. Hogers, and published in De Bartons established physical. Journals.

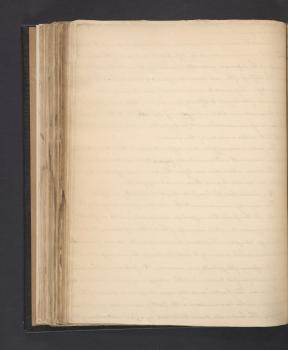
Then it present from orbot the first regrapheness are fall in two to or three days, and when it wise from organic linewise smally encount days before any telanic regrapheness are preserved; and these often set in shouth? wifured parts is fine from pain, or even when it has intirely healed,

It Most Index, however hate after a wound or characteristic opposition in the Mate Indies, however found any time with the patients was introduced.



The allack in every case commences with a slight tention at the present agarder which is new accompanied by stiffings of the back part of the neck. The uneariness at the poterries, gradually increasing, at length amounts to were pain. The stoffness of the nech renders it difficult to mave the head. The jour also become stiff. They cannot be moved without pain. A sense of stricture is perawa at the root of the longue, a difficulty of wallowing takes place, which pregu quently terminates in a total interruption of deglitation. In this situation The patient refuses newsishment, as deglicition is not only painful in itself, but excites wreturn of the spasm. The pulse is very different in different cases in this stage of the durant Sometimes it is small and remarkably fraguests, and sometimes slewand hard. The lower extremities, wen before they are much affected with spann, are fuble, and unable to give their usual supports. It is observed that the borsels are almost universally contipated. The second stage commences with the extention of pain and rigidity to the extremities. In this period there is perhaps no columbery musele unaffected Comy part appears to sustain more or less of the burther of disease, Obstinate walthfulness takes place. The patient however retains the free use of his intaklates and senses; which serves only to make his situation the more misproble. The sufferings of the patient goon increasing. He feels now and there a such "den, and most prainful traction about the cartilage aniformis, which tends to wards the spine. This traction widently depends upon a spasm of the diaphragm, and has been considered as the pathogneumonics symptom

of Itanus, The head is also drawn backward by a fixed contraction of the



posterior murcles. The pain at the presordia returns every ten or fifteen minutes? and weres to bring along with it a stronger retraction of the head, and a more sistreping pain of the nech, asunding to the oripute. This porterior pain, and sparmy extends instantly from the Occipate and nech, along the spine, to The lower extremities. The whole bedy is extended, rigid and immovable, or convalued and recurrented. The jaws are either fixed open, or as more commonly seurs, rigidly backed together. any effort of the attendants to open the & jaws, when locked, or to sheet the mouth whenit infixed open, hurriest on the general spanns, and subjects the patient to consummate agony In the violence of a parasism the muncles of the whole body and 4 territies are thrown in the strongest degree contracted, and the body and extremities are thrown into new positions, which are govern ed by the superior force of the largest of there. The mudes of the jour and nocks, and the pertands and although muches supply their great proved of allier. The shoulders and break are projected; the arms strate her out, on these or weefs the body; and the hands either rigidly extended, or the fingers cliniched The paroximo remits in a few minutes, and though the patient sile? suffers from your and pain he remains for a while comparatively relaxed and easy, After every paroxism respiration is huvied, as if from excepive exercise. The face is in some instances, pale, but for the most part plushed during the foregion remission of sparm. The countenance is expressive of the most meloncholy distrefs. The direce has now allained its atorost violence. The patient is constant

ly in the ture; for the spann, warsely remitting for amount is in more ward of an interest of a first in any war of a form the spanning to the power of different in

At of much invery different, and as they art in some manine energinally in the word of the disease paresion, the body is found into consum with by pointed intercent . The belly is constructed and hard. The abdominal much send good to the descent of the displayers, which is stuffing a state of painted be realised, giving majorature in respiration. Such is the state of painted above of the disease.

The third stage, in the warst case, or those which do not a apune a convalueent crisis, is gradually established by an aggrave time of July the violent sympotomes, consider with a wishing of the more

important functions of life.

The peaks betters or the hard thools with amozing pequency and incompletely giving a pecceliar papertating motion to the projection region. The hard of the body diminishes, Articulation, lectures in distinct; the owns of the wise is changed to a grating and partitioner, in weathering the owns of the wise is changed to a grating and partition, in weathering the owns of the gives are repet before the the think and now is known to every thought if they could be weather with amont is in traduced.

The or housette suffers onjugs in report, Sometime, a transient of some newsing in the internals his been mixtaken for sleep; but quaint day is never enjoyed. A debrisem more progressly than come concessed to be unauted with the will and anxious eventuance of a year and depairs. There is prequeally a apprepries of write; or it ipus with affinity, and it

jets when the blader is compressed. It the disease draws to achow the try the try is in meeting a valently though to true to the the the the perhed is a congition the repeated by distorted, are commandly first and immendated

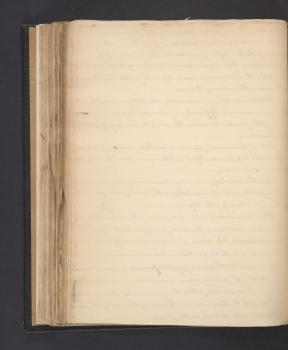
what we last. The mer is drawn spoortes the charles backwards, and the idea materians is made to repeate our dispusable, the posterol, and district given the model of all their sufficiency and amount of the former was their end there is agreed unto dimension on the pains and planed with a cit and uncoursed succeeds to far the mortale invention of the pains and comments to be a considered to the mortale invention of the training.

I dame was ably and minutely survived by some of the whole writers on medicine. Hippocratis in protecular, her given such surprises of this disease as wince the extensive accuracy of pathological characteristics.

allot of the amiant physicans had three varieties of letomes in their books, but it is doubtful whether more than two way distinct one wint in mature.

When the nach bedy, and option ites, were extended, chaight fregid, and in florible, with the jaws bother or the mouth fixed open - the affection was strickly cated lettener.

When more violent action tock place in the relientary messour, the partirer ones being the most powerful wints therefore land
the ledge dasherands, like a low and produce what they towned opinthe ledge dasherands, like sade is Moreun-lack and immerior immercably
the materiar nuch and therap are projected prevards a sudanimerane
of sporm, attended with a principle grown, cheete the absence, and the patant
opings on his head and heals, to that the spine and hope power an archeor
the leas to tumber to either nide; or is thorown by the force of the much



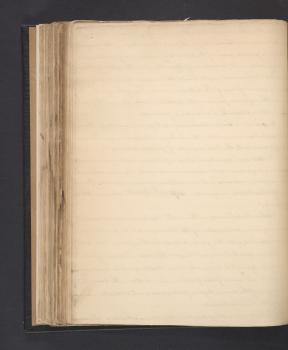
When the ordered much, with wall energy, but day the energy word, the disease was trained one prowhetener, The visit here of the east form of blume, or governe your of the reduction, much, is very questionable. It is not made in the discreption of the proposation and in the agent to so provided by the state that comment agist. Emprosthe two conditions and provided of the affection of provided the control of the affection of the action of the affection of the participants acting a they to an affection of the participants acting a they to an affection of the participants.

Colors and Colies observationers as linguisted monthely, Hounds boule, as has been enumerated. Which, they must have conjunded a partial affection, with the true varieties of general detarner.

Collet voys "high channellus importanios melineque mobiente o qui queden segre morbinete o qui queden segre morbinete contra peter organis, mode modimo poderi admissi amedite, moto vistamo el remodifica copia in intendete. Privisi, o openi que Molenon, intendete, moto vistamo o la mante o peter de la morta de la mante o contra de la mante del mante de la mante del mante de la mante del mante de la mante del mante de la mante de la mante del mante de la mante del mante de la mante del m

Colins Autholianus in the right chapter on accede discover by gover a way ministed discreption of the telement under the general name of sparmer, which after the greeks, he divided into these forms. There, he do to to form the tense, opin the tense and tempore the tense. It sain affection your alloy to define to be an involved stry that thing and embading put with violente and would pring from exception toolian. He towns the Opinhamic forms of the divare. Hopeus porting answer, what litterally, means a foreing of the Lead leacher are.

I shall notein this place trace the various distinctions and mange



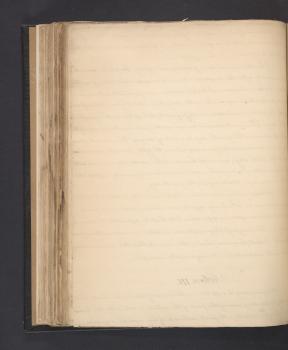
menter of blancie affation, invested by the modern modegists. There of fundings over absolute to people; and though butters are more simple, they are bake to dischere, See his synapsism

When this disease some from organic injury, though it does not selve quety of the he accepted a because in rejected alluthing from the alluth, Coldier observes and his observation is inspired alluthing from the bowne porticularly agrantic with its history, that it of the hill in produce the formal agreement in the place as the fourth of fifth day. The much admined around wither just margey this veneral hip paints verience the fourth day, he is not of daying this veneral, who evened to live in the fifth, when we were let as the took day; as is well known to the fifth, we want to be a sure as in the fifth, when the way as in well known to the most very minutes as in the first he day; as is well known to the most very minutes in preparation as the disease is probable buying the fourth day.

Thoms from or anie beauty admit universely mostate when the week to the house of the legs ages he never need one patients who have a complete tetanen after an appearation, but that he presents the decrease immany. The secret of Heppicralis was so letter, increase resulting from wounds, I shall have very show in the reguel that the decrease aring from such accident is not may parially increasely.

Section, 111.

Himmughary to deall languar the sources of phanes. An ample and i highly interesting view of the part of the estype, is taken by the learns popper of contention the pirot walliance of his wredich ingricies and s



phosostian. He says "all the remote and pre-dispring course of letames are by indexing proton advance debilety, and initiately in the mucular protos of the body"

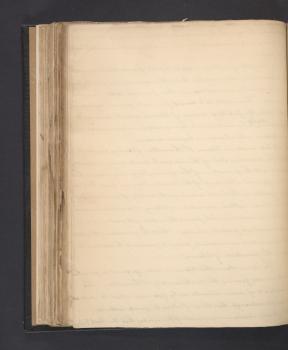
The father of medicine supposed that all opening depend an appeal on appeal on appeal on appeal on the found of control of the entire of possible for the entire by experted an appeal. Here is letter by experted as appeals. The interest of the most of the entire of the

his disease. See officely an highest diseases.

A late wister, on Islames B. He amilton of libertury, appears to thank the presidency state of the interior to country one observes that consists with the formation of the disease. Every one observes that with the formation of the disease. Every one however that with an attendent of the disease, Every one how that will be not made in the lowest induses great variety of your as commodisely. I have considered to the manufactor of the three which to manufactor, and which posent through on the great migranity, "make it exceedingly probable" he ways - "that the functions of the three and interior or are metalially drawing its previous to the aleasy, and a interior or are metalially drawing its previous to the aleasy, and

The writer Mane that tetance is more prequent in warmflow in into dimates favours the untiments of BH wouldon. The inhabits not of exarm climates are by favourne subject to intellige the intelligence and welfive rap, than those of cits in temperate lattender,

Belovely observes in some part of this works; that the Most Indian



system as hable for a habitual retention of the emberts of the bowels. He says that it is customery with the second to have only one or two courses atims weekly. He remarked also that much larger does of cathootic as requirete, in order to open the bowels in the southern than in the most first states of America. Boston testians

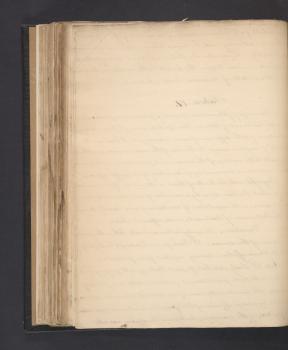
Section, IV.

The marge of Physicians it is part of pretise me presences. Here in the treatment of laterium This is perhaps our ing to their modern on all amounts for the higher conference in all amounts of the course for the modern subject to the modern subject to the modern subject to the modern of the course which presented it, and demonstrate or their presented it is professionally a continue species to the modern of the course which presented it professionally and demonstrate to the professional subject to the subj

Imprified with the truth of theor instrument, I full emoring to rehave what has been done by a number of remidies and in warion views of practice, in the expectation of areataining more clearly to myrelf, the lest move of trialments, under different states.

Vouralier . The united but been arounded both with present from and were of this disease. I black from I bledwing to be highly neeful in telonic officient, marring in getting from patients.

Must B Mosely states that prejuent blading, with guaging and a law sist is the list presentive, in partiers shall so injuries of the head. He monitions the case of one Moselet whom he ingious was south by a large of fersion of blad from his head in an apperation for a practice of the cranework. In this case the disease was not.



alligithe preventer, but it was light and the patients recovered.

Jurgalies. I Tuck insulationer attention to the immediate in the immediate in the light appearance of incomes in my criticism, which is the larger than the least of properties of process of any agents. Perhaps there is no cause of telames in which they should not be studyed the implayed; either, by the mouth, only commended in cause of organic living my given prophylactic of assumetion in cause of organic living of the accessor to go at prepared on a prophylactic of the best of the interest of the accessor. If the best of the interest of the accessor, is recommended by Bilburdey, Bull of knowledge of me writer with blackery, is recommended by Bilburdey, Bull of knowledge of me writer with blackery, is recommended by Bilburdey, Bull of knowledge of me writer with blackery, is recommended by Bilburdey, Bull of knowledge of me writer with blackery, is recommended by Bilburdey, Bull of knowledge of me writers with large seminate streets on the administration of frequency and Bilburdey.

D'Eurie of liverpools, ravys begans great relief in two cases by

the exhibition of laxitive glystous.

The elight view which I have given of the elott of the option at large, and particularly that of the primes this, in tetermaption principally in favour of their use in the treatment of it. And on for all they have been negligible a opposers they have absorbed

PMouley is justicious in recommending apparaints or glyder good ing medicine, a cool nown, and a careful regimen, as precumtives of the

ducan, after received approaches accidents or neglial operations.

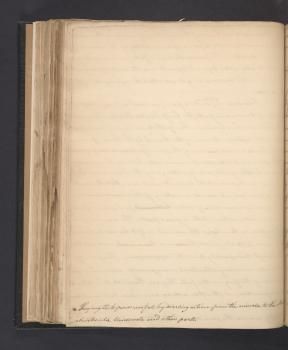
Comoliched. There have been rearely revoled to a remidies for telenic affection. Phush says he "inlocked the jump faceman who was virged at the same stone with a rematting pure by " an emotion."

Them what we know of the influence of eners on the master, again, it would be expected to proceed from a dillety in the direction, and consideration. In proceed the best of well execute a proceeding influence and the system, and yet not attack the organization of the prima rice.

This would be a superior of the master of the prima rice.

This woulding from printered as ment, or elight injuries of tenderace parts the haife has presed as presed y cure.

I Chalmers has known the bjirthotones to arise from a light wavered of the externor tenden of the thereb by the thorn of anorang bu. He thinks in such cases one of the principal weaveres for present ing the sparm, is to intersept all communication between the remarium commune and the injured parts, by cutting acrefs the tinden or makings. an incipior quite down to the bone, It want never, that Me advantage from incipion does not depend on setting of the communication, but on giving a new state of action to the parts, perhaps an inflament my or suppurative action, to the injured part, The common prace the therefore is to enlarge the wound, or if it has nearly heated, to cut down into it, and at the same time mak such appliedly to it, as will tend speedily to excite supportation. This plan of treatment, and every other local managements, ascorrading and amputating, too prequently fail. They are therefore to be attended to inconjunction with other active remidies, but must on no account be relied on alone. Sametimes indeed incisions instantly removes the general disease, so that perhaps no other many



we afterwards neeps by from plate the were, unless a purgative to

Gillm. This has been before to as the anchor of hope by about very meters of projection, in the breatment of fectiones.

Johnson is antended by a proper reacity; but it to often it follows to form a fall of mental project of the all of the both as form a part of an extensive plans of superfy. I hind of Martiel before appears to have hope and appears to have hope and according to the and with a pull dear; but be full dear, and opened one in the mental with medical power a work of mental with medical power a work of mental with medical power and the work of the form of the hours, without produces of long of a dearing the work of any open for hours, the worker add to that he never form any further of one of one of one of the produces of the control of the work of the superfield of the medical power of the control of the work of the control of the contr

zuen, alone, har werz beung franz wildtez: Weiner I News 6 m. I Ceirre Same Jund winn hizhly aw Jule when likevally amplezed, It has been wein hiz ather frhysicians with zeit

effect since There gardlemen gave the their opposition conversions its to the public. Totames has been even by ardeal spirits likewise.

Ja Brushs observations, &.

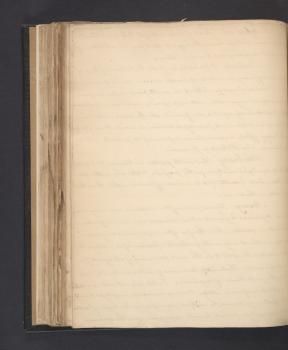
Birth. Tenish of the mark powerful hand, must four ab least Jacons with a provention, and when they can be exeminated as a cerebiae agents, I Be where confirms what this theory requires, John forthe harbest and with receif.

shimble right

EMILIA cills. The sit of ombor is throught to be a considerable interpression. Black has never the haggiest of feels from the exhibition of in original through wery two haves in talances.

Bulsams. I Hickland has found the bulsams of Don of singular of freeze in violents of parameter discours, asis ing from organic liver. Medical Surgery. I think it wast prove weefed on present the words of prove angled on present the words of parties in the delivers in the blands but I wint hardly expect a wire from it, when the discours is established. I Hegers worth is most proceedings below in a vedent ineappying, with happy effects a creen trace, information of its probable with the interest of the probable with the single of the probable of the single of t

a Menting. The great presers of this medicine over many disamples led they incare to great to a brief, wherevery were more in dangerous met with in practice. It is therefore after employed in dangerous affections without any well greatered experiment of its which you was consisted in thought to be the most paramining of all agents for make present in thought to be the most paramining of all agents for me experiments. Tookundely its various qualities randoms it, not trained the first theore of applacements between along the most of all the way that he of some altities, the law of which we wall proversion by the hope of advantage which he will never gain over the disease.



He may in some cases prove a surful austary. But he was a cute completed by a saturation. Be Marely is of openion that Mariney will intomes has billed more people than it has cured.

Warm, balle. The use of warm forces taken in the official forces in the officer forces in married in the warm lath, are recommended of Colors. Mention practice confirms the product of the last manual in particular cases. The warm both is indicated by a surpressed forces of the warm, frequent fuller, or by a blow facilities by a boy a busy and the married forces when with married and a strength on the processor and friendings with married of the lines. It may property on played a way time when there is no fibrillings. It may property

Cold bath or affersion. This was the favouries or many of Hippurate, its mysenfour with a white theolog wine in a will a thirty of our grist allows. The thought was princip plant of our water as the patient. It restore the natural heats which was the inear. The inext whis positive to the following only in the moments. The allowing only in the moments the allowing of the gristians we will be the hourse of Bright of the water of the water of the strip of the trade of the trade of the strip was happy in the result.

Bluck employed the old of juin with week, warmering from oninging done to one of the loss by wearing a light shoes. I girdlestoore was uniformly consucceptful with the old bath in the Cart Indies.

legerate Townsolver with a white thinks were

Toldier. We far in the remisely has had a trial it has been attracted with me would show of weigh the grown in to become one of the most valued agent in the breatment of tetance.

Telaco was first wid in between by B Fredericky May, when he was a steadent of medicine. He was arisety, by he prospeter, De Haven to give it a third in a most violent one which a very form a would. The ingreey within case was produced by first over the formation of the reserved to. An the twelville day the right and the hughest, and of the tolerans was not it to committee the increase was set it hught, and of the other means had entirely fails to midgate the hught, and of the other means had entirely fails to midgate the synptoms or check its carreey. The administrate the minimaly was foremany. And gauset in the optnariancy done of two accession decisions. He populate the whole of the beingth of this large quantity of this was was not approached by half a found on this or hit its could not fail to produce approach of the weather the third could not fail to produce great effects on the measure register.

The next brief of those, communitates to the public warms one may fully treeter by Droger, This case appeared in the Pheladelphir treeter with physical Journally. Will "He you the medicine in the form of course, best in a much smaller dose than that of Lelley, Droger, where hamberge of the Mays succept paracles one drawn in distilling, in any formedate case, which wasse from violente exitation of which wasse from violente exitation of which was to be the operation of proportion with patients received her would health by the africance of projections.

D'Rogers informs me that he has put an immediate stop to the parms in another similar case, by a ducation of two draws in eight comes of water, administered by enemas. I under Tand there have been than trials of totace in the disease of which we are breating: but I amigne much however of the surely attending them, as they have not been laid before the publics. The success of D'Curries in spicepey, by means of the bacco indis cate its power over the muscles. Its speedy operation as an ometics, in any way in which is presented to the prema via, also shows that it must greatly affect the muscles; for all emoties in feell deveryed affects them very considerably. To has been found to be in practice what Theory would, expects, amost powerful antisparmadic or reother of mucular contraction. I that it will prove a letter and more certain remity in this terrible disease than any betherto employed in its treatment.

